

CLAIMS

What is claimed is:

1. A method of manufacturing a memory device comprising:
5 measuring operating current values in each of a plurality of memory devices; and
storing the respective operating current values for each of the respective plurality of
memory devices in a plurality of programmable elements on each of the
respective plurality of memory devices.
- 10 2. The method, as set forth in claim 1, comprising coupling each of the plurality of
memory devices to a substrate to form a memory module.
3. The method, as set forth in claim 2, wherein coupling comprising coupling each of
the plurality of memory devices to a substrate to form a dual inline memory module.
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4. The method, as set forth in claim 1, wherein measuring comprises measuring the
operating current values in each of a plurality of random access memory devices.
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5. The method, as set forth in claim 1, wherein storing the respective operating
current values in the plurality of programmable elements on each of the corresponding

plurality of memory devices comprises storing the respective operating current values in a plurality of antifuses on each of the corresponding plurality of memory devices.

6. A method of operating a memory module comprising a memory device coupled to a substrate, comprising:

providing a memory device comprising a plurality of programmable elements

having operating current values stored therein;

reading the operating current values from the plurality of programmable elements on

the memory device; and

storing the operating current values on a non-volatile memory device, wherein the

non-volatile memory device is coupled to the substrate.

7. The method, as set forth in claim 6, wherein storing the operating current values on the non-volatile memory device comprises storing the operating current value on a serial presence detect device.

8. A method of configuring a memory, comprising:

reading respective operating current values from a plurality of programmable

elements located on each of a plurality of respective memory devices,

wherein the operating current values correspond to a respective one of the

plurality of memory devices, and wherein the plurality of memory devices

are configured to form a memory module; and

configuring a system in accordance with the operating current values from the
programmable elements.

9. The method, as set forth in claim 8, wherein reading comprises reading operating
5 current values from a plurality of antifuses located on each of a plurality of memory devices.

10. The method, as set forth in claim 8, wherein reading comprises reading operating
current values from a plurality of programmable elements located on each of a plurality of
random access memory devices.

10 11. The method, as set forth in claim 8, wherein reading comprises reading operating
current values from a plurality of programmable elements located on each of a plurality of
random access memory devices, wherein the plurality of memory devices are configured to
form a dual inline memory module.

15 12. The method, as set forth in claim 8, wherein reading comprises reading the
operating current values from the plurality of programmable elements during a boot of the
system.

20 13. The method, as set forth in claim 8, wherein configuring comprises setting
operating current thresholds in the system in accordance with the operating current
values.

14. The method, as set forth in claim 13, comprising throttling the memory module if an actual operating current in the memory module exceeds the operating current thresholds during operation of the system.

5 15. A method of configuring a system, the method comprising:
providing a plurality of memory devices in which respective operating current
values have been stored in a plurality of programmable elements located
on each of a plurality of respective memory devices on a memory module,
wherein the operating current values comprise measured operating
10 currents corresponding to the respective memory device;
copying the operating current values from the plurality of programmable elements
on each of the plurality of memory devices to a non-volatile memory
device on the memory module;
reading operating current values from the non-volatile memory device on the
15 memory module; and
configuring a system in accordance with the operating current values from the
non-volatile memory device.

20 16. The method, as set forth in claim 15, wherein providing comprises providing a
plurality of memory devices in which operating current values have been stored in a
plurality of antifuses located on each of a plurality of memory devices.

17. The method, as set forth in claim 15, wherein providing comprises providing a plurality of memory devices in which operating current values have been stored in a plurality of programmable elements located on each of a plurality of random access memory devices.

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18. The method, as set forth in claim 15, wherein providing comprises providing a plurality of memory devices in which operating current values have been stored in a plurality of programmable elements located on each of a plurality of memory devices of a dual inline memory module.

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19. The method, as set forth in claim 15, wherein reading comprises reading the operating current values from the non-volatile memory device during a boot of the system.

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20. The method, as set forth in claim 15, wherein configuring comprises setting operating current thresholds in the system in accordance with the operating current values.

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21. The method, as set forth in claim 20, comprising throttling the memory module if an actual operating current in the memory module exceeds the operating current thresholds during operation of the system.

22. A memory module comprising:

a substrate; and

a plurality of memory devices coupled to the substrate, wherein each of the
plurality of memory devices comprises a respective plurality of
programmable elements and wherein a respective operating current value
for each of the plurality of memory devices are stored in the respective
plurality of programmable elements.

23. The memory module, as set forth in claim 22, comprising a non-volatile memory
device coupled to the substrate, wherein a respective operating current value for each of
the plurality of memory devices are stored in the non-volatile memory device.

24. The memory module, as set forth in claim 23, wherein the non-volatile memory
device comprises a serial presence detect device.

25. The memory module, as set forth in claim 22, wherein the memory module
comprises a dual inline memory module.

26. The memory module, as set forth in claim 22, wherein each of the plurality of
memory devices comprises a dynamic random access memory device.

27. The memory module, as set forth in claim 22, wherein each of the plurality of
programmable elements comprises an antifuse.

28. A system comprising:

a processor; and

a memory module coupled to the processor and comprising:

a substrate; and

5 a plurality of memory devices coupled to the substrate, wherein each of the plurality of memory devices comprises a respective plurality of programmable elements and wherein a respective operating current value for each of the plurality of memory devices are stored in the respective plurality of programmable elements.

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29. The system, as set forth in claim 28, comprising a non-volatile memory device coupled to the substrate, wherein a respective operating current value for each of the plurality of memory devices are stored in the non-volatile memory device.

15 30. The system, as set forth in claim 29, wherein the non-volatile memory device comprises a serial presence detect device.

31. The system, as set forth in claim 28, wherein the memory module comprises a dual inline memory module.

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32. The system, as set forth in claim 28, wherein each of the plurality of memory devices comprises a dynamic random access memory device.

33. The system, as set forth in claim 28, wherein each of the plurality of programmable elements comprises an antifuse.